

SOME OBSERVATIONS
ON THE
PREPARATION
AND
MEDICINAL EMPLOYMENT
OF THE
IODURET
AND
HYDRIODATE OF IRON.

BY
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&c. &c.

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TO

PELHAM WARREN, M.D. F.R.S.

FELLOW OF THE ROYAL COLLEGE OF PHYSICIANS, ETC. ETC.

MY DEAR SIR,

THE high reputation which you deservedly enjoy might be regarded as a sufficient reason for my desiring to communicate to the profession, through you, some particulars respecting the Ioduret or Hydriodate of Iron; a medicine which I have had the satisfaction of introducing into practice, and which is, now, very extensively employed: but the circumstance of your having been one of the earliest of my medical friends who witnessed its efficacy as a therapeutical agent, is the chief reason for my addressing you on the present occasion. I feel also that it is incumbent upon me to point out to the profession the characters by which the genuineness and goodness of the preparations of the Ioduret and Hydriodate may be ascertained; for I regret to say that both have been so carelessly and improperly prepared, in many instances, as to pro-

duce effects on the animal œconomy directly opposed to those which might be expected. Indeed, after having examined some of the specimens of these preparations that have come under my notice, I have been surprised that they have maintained their ground in the opinion of the profession. The Ioduret of Iron, and, consequently, the Hydriodate which is merely the Ioduret in solution, is a medicine which requires much accuracy of manipulation in the chemist who prepares it; care in the pharmacist who compounds the prescriptions containing it; and attention to its chemical affinities in the practitioner who prescribes it.

With every good wish, believe me to be, my dear Sir,

Yours faithfully,

A. T. THOMSON.

3, *Hinde Street, Manchester Square.*

30th July, 1834.

OBSERVATIONS,

&c. &c.

THE Ioduret of Iron has been known for a considerable time as a chemical compound; chiefly employed in the preparation of the Iodide of Potassium, or, as it is termed, the Hydriodate of Potassa, a medicine much used, both on the Continent and in this country, in scrophulous affections. In making the Ioduret for this purpose, an hundred and twenty-six parts of pure Iodine, and about forty or fifty parts of clean, soft iron filings are put into a flask, and mixed with fifteen hundred parts of water: the mixture is then heated until the liquid becomes clear; after which it is filtered. This is a solution of the Hydriodate of the Protoxide of Iron; it consists of Hydriodic acid ($I. + H.$), 127 parts, or one equivalent; and Oxide of Iron ($Fe. + O.$), 36 parts, or one equivalent.

When the solution has evaporated nearly to dryness, both the Acid and the Oxide of Iron are

decomposed, and water is formed by the union of the Hydrogen and the Oxygen that are evolved, so that a compound, containing only Iron and Iodine, or a solid Ioduret, remains. The components of this Ioduret are Iodine, 126 parts, or one equivalent; and Iron, 28 parts, or one equivalent.

In this form, the Ioduret is usually prepared for medicinal purposes; but, as it can only be prescribed in a state of solution, on account of its deliquescent character, the Hydriodate of the Protoxide of Iron may, in strictness of language, be regarded as the real therapeutical agent.

This solid preparation, the Ioduret, attracts powerfully the moisture of the atmosphere, and rapidly deliquesces. In its passage from the solid to the fluid state, the water which it attracts is partly decomposed, and, whilst its Hydrogen unites with the Iodine to form Hydriodic Acid, the Oxygen attaches itself to the Iron and oxidizes it; but, instead of being wholly converted into a Protoxide, the form in which the Iron exists in the Hydriodate, a part of it is changed into a peroxide and separates from the Iodine; so that, when the preparation is dissolved, a copious precipitate of Peroxide of Iron is always thrown down, and a quantity of free Iodine is found in the solution. On this account, several precautions are requisite to be observed in the preparation, and also in the preservation

of either the Ioduret or the Hydriodate, for medicinal uses.

1. *Precautions necessary for selecting materials.* The Iodine should be pure, in bluish-black, opaque crystalline flakes, having a metallic lustre, and a specific gravity 4.948; volatilizing without any residue, but forming crystals as it cools; and dissolving completely in Alcohol and in Ether.

The Iron also should be pure, soft, and perfectly free from rust: it may be used either in the form of filings, or in that of thin wire, such as is usually sold in coils. I prefer the latter, on account of the softness and purity of the Iron, which must necessarily possess both of these qualities before it can be drawn into wire.

2. *Precautions necessary in the preparation of the Ioduret and the Hydriodate.* One part of the Iron wire should be rubbed in a porcelain or a Wedgewood's mortar with about three or four parts of Iodine, gradually adding distilled water until fifteen parts of the fluid shall have been used: the whole is then to be introduced into a Florence flask, with an additional portion of Iron wire, and of distilled water. This excess of Iron is a matter of indifference in the preparation of the Hydriodate; and, in that of the Ioduret, it is necessary for preserving the combination from decomposition, during the evaporation of the

solution. These materials are next to be boiled together, until the fluid acquire a pale greenish colour, when it should be filtered. This solution contains a Hydriodate of the Protoxide of Iron; and if the exact quantity of the Iodine be previously ascertained, so as to enable us to procure the solution of a definite strength, it may be kept in this state for medicinal use. In general, however, the solution is evaporated to dryness; and for this purpose it may be poured into a clean flask, containing a piece of Iron wire sufficiently long to reach from the bottom to the surface of the fluid, and the boiling should be continued until the bulk of the solution be reduced to one third. It must then be filtered; after which the evaporation should be continued to dryness. It is necessary to break the flask as soon as the mass is cold, in order to obtain the solid Ioduret, which should be immediately transferred to a dry bottle, fitted with an accurately ground stopper. The bottle should not hold more than two ounces of the preparation; for, when it is large and not full, the Ioduret deliquesces nearly as rapidly as when it is exposed to the free action of the atmosphere. When the flask is broken and the Ioduret bottled before the mass is cold, deliquescence also takes place: a Peroxide of the metal is formed, and Iodine is evolved.

3. *Precautions necessary for preserving*

both preparations. The Ioduret requires to be well secured from the influence of the atmosphere; both on account of its deliquescent property, the rapid oxidizement which the iron undergoes when deliquescence occurs, and the consequent decomposition which takes place. It is important to prevent this state of things, as the Peroxide of Iron is inert as a medicinal agent; whilst the free Iodine, extricated during its formation, alters, altogether, the virtues of the medicine. This partial decomposition of the Ioduret is rendered immediately apparent, on dissolving it in twenty times its weight of distilled water and filtering: instead of a permanent, *clear*, very pale *greenish yellow*, we obtain an ochre-coloured, or brown solution, which soon becomes turbid, and gradually deposits an ochre-coloured, completely insoluble precipitate. Much of the Ioduret usually prepared both by many Chemists and Druggists, and also General Practitioners, is of this description; and to this we may refer some of the disappointment and discrepancy of opinion of different Practitioners respecting the operation of the medicine in similar cases. Even when the Ioduret has been carefully prepared, and is good of its kind, it often contains a little free Iodine: but it is chiefly owing to the carelessness of assistants and apprentices, in compounding prescriptions, by frequently expos-

ing the Ioduret to the air, that its properties, and consequently its medicinal powers, are impaired: thence, it is preferable to keep it in solution, or in the state of the Hydriodate.

If the solution be prepared with a definite quantity of iodine, as already described, it will keep without changing its characters: but as it is usually made by dissolving the Ioduret in distilled water, it requires to be rendered neutral by the following means. Introduce, into a flask, the solution of any given strength, and place in it two or three doubles of clean, soft Iron wire, sufficiently long to extend to the surface of the fluid; boil it for a few minutes, and then leave it at rest until the solution become clear, after which it may be either decanted off from the precipitate which forms, or filtered: no further change takes place in a solution thus treated, if it be kept in a blackened or a green bottle, however long it may be preserved. In this process, the wire affords Iron to saturate any free Iodine present in the solution, or that may have been extricated by the formation of the Peroxide of Iron in the Ioduret; and a perfectly neutral solution being thus obtained, by the immediate conversion of the new-formed Ioduret into the Hydriodate of the Protoxide, no subsequent change takes place as long as the solution is kept secluded from the light. It is not easy to explain this influence of light

in decomposing the solution of the Hydriodate of Iron; but several other of the metallic Hydriodates are affected in the same manner by light. The best proportions for forming the medicinal solution are three grains of the dry, solid Ioduret to each fluid drachm of distilled water. If the water be not either distilled, or filtered rain water, perfectly free from foreign ingredients, particularly if it contain any earthy or saline carbonates, decomposition instantly takes place, Iodine is extricated, and a Carbonate of Iron, which rapidly passes into the state of the Peroxide of that metal, is precipitated.

4. *Physical and Chemical characters of these preparations.* When properly prepared, the *Ioduret* of Iron is of an iron-grey colour, brittle, breaking with a somewhat foliated fracture, and displaying a crystalline texture, not unlike that of metallic antimony, except that it is darker coloured. When perfectly dry, it is inodorous; but when moist, it exhales a slight odour of iodine: when dry, its taste is simply styptic; but when it has become moist before being tasted, it is slightly acrid. It is probable that both the odour and the acrid taste depend on the extrication of free Iodine, owing to the partial decomposition which the Ioduret suffers in deliquescing. The Ioduret fuses at 350° Faht. and is decomposed at higher temperatures: the whole of the Iodine is volati-

lized, and a Peroxide of Iron remains. Owing to its deliquescent property, it dissolves in every proportion of water; and, as has been already stated, it changes during solution into the Hydriodate of the Protoxide of Iron.

The solution of the *Hydriodate* of Iron varies in colour from a deep greenish-brown to a very pale green with a slight tint of yellow, or to perfect colourless limpidness, according to the neutral state of the salt and the quantity of water employed. When very carefully prepared, I have procured the solution perfectly free from colour, even when it contained three grains in each fluid-drachm. When it is of this strength, which is that best suited for medicinal use, it should always be nearly colourless, or at most of a very pale greenish-yellow colour, transparent, free from any deposit, inodorous, and styptic to the taste without acrimony. Every shade of brown, in a solution of this degree of strength, indicates the presence of free Iodine; which is also demonstrated by the blue colour communicated to thin, cold mucilage of starch: for when the solution is perfectly neutral, no blue colour is evolved.

The solution of the Hydriodate is decomposed by,

1. *Chlorine* — both in the gaseous state and in solution; the Iodine being set

- , free and Muriatic Acid formed.
2. *The mineral acids*—which form salts with the Protoxide of Iron, and set free the Iodine.
 3. *Arsenious acid* — which throws down a precipitate of Arsenite of Iron.
 4. *Meconic acid* — (consequently solutions and tincture of Opium) which deepens the colour, and forms slowly a precipitate of Meconate of Iron.
 5. *Gallic acid and Tannin*—which form an ink.
 6. *The pure Alkalies* — which precipitate the Iron in the form of Protoxide, and leave an Hydriodate of the Alkali in solution.
 7. *Pure Cinchonia or Quinia*—which throw down a copious precipitate, whilst free Iodine appears in the solution.
 8. *The Carbonates of Alkalies*—which throw down Carbonate of Iron, and leave an alkaline Hydriodate in solution.
 9. *Sulphate of Copper*—which precipitates a Hydriodate of Copper and leaves Sulphate of Iron in solution.
 10. *Nitrate of Lead*—which throws down a yellow ^{*Iodide*} ~~Oxide~~ of Lead.
 11. *Nitrate of Mercury (proto)*—which precipi-

tates Protiodide of Mercury :
(per) a Biniodide of Mercury.
In both cases Nitrate of Iron is
left in solution.

12. *Permuriate of Mercury*—also forms Biniodide of mercury, which is precipitated, whilst Muriate of Iron is left in the solution.

13. *Nitrate of Silver*—which causes a very copious curdy precipitate of Iodide of Silver, Nitrate of Iron being left in the supernatant fluid.

14. *Arsenite of Potassa* (Liquor Arsenicalis P.L.)—which throws down a copious precipitate of Protoxide of Iron, leaving a Hydriodate of Potassa and of Arsenic in solution.

15. *Hydrosulphate of Potassa*—which throws down the black Sulphuret of Iron, and leaves Hydriodate of Potassa in solution.

16. *Hydrosulphate of Ammonia*—which precipitates black Sulphuret of Iron, and leaves Hydriodate of Ammonia in solution.

17. *Acetate of Lead*—which precipitates Iodide of Lead, and leaves Acetate of Lead in solution.

18. *Oxalate of Ammonia*—which throws down Oxalate of Iron, and leaves

Hydriodate of Ammonia in solution.

19. *Hydrocyanate of Potassa*—which first forms a Protoxide of Iron, that, reacting upon some of the Hydrocyanic acid which is set free, produces a Ferrocyanate of the Protoxide; and, secondly, this attracting Oxygen, is converted into Prussian blue*: a Hydriodate of Potassa remains in solution.
20. *Infusions, Decoctions, and Tinctures of Galls, Oak bark, Uva Ursi, Pyrola Umbellata, Cloves, Roses, Cinchona bark, Cusparia, and all vegetable substances containing Gallic acid or Tannin*—form inks.
21. *Infusions of Foxglove*—which throw down a dark olive-green precipitate.
22. *Infusions of Belladonna*—which form a dark brown, curdy precipitate.
23. *Infusion of Hyoscyamus*—which produces a slight precipitate.
24. *Infusion of Tobacco*—which forms a copious curdy precipitate.

* On the addition of a few drops of Sulphuric acid, Prussian blue is immediately formed.

25. Vegetable Infusions and Decoctions containing *Fecula*—which afford a cerulean blue precipitate, the Iodide of Amidine, when the solution contains the smallest portion of free Iodine.

With all of these substances, therefore, the solution of the Hydriodate of Iron is consequently incompatible in prescriptions. On the other hand, it may be ordered in combination with all the saline *Sulphates*, *Nitrates*, *Muriates*, *Chlorates*, and *Phosphates*: with bitter vegetable infusions and decoctions containing neither *Tannin* nor *Gallic acid*, namely, simple *Infusion of Orange peel* (the tannin of the Cloves in the *Compound Infusion* of the London and Dublin Pharmacopœias causes a black precipitate), *Buchu*, *Gentian*, *Quassia*, *Senega root*, *White Hellebore*, *Dulcamara*, &c. &c.

Such are the physical and the chemical characters of the Ioduret and Hydriodate of Iron; their most remarkable properties are the extreme solubility of the Ioduret, and the facility of decomposition of the Hydriodate—qualities of great importance in medicinal agents.

6. *Medicinal properties of the Hydriodate of Iron.* In reflecting upon the solubility of the Ioduret of Iron; and the striking difference, in this respect, between that compound and

its components* ; and, knowing the value of these separately, as medicinal agents, I inferred that the curative influence of both might be greatly enhanced by the facility which the compound affords of introducing them into the system, in the state of combination. Another consideration which led me to suspect that this combination of Iron and Iodine would prove a useful medicinal agent, was my knowledge of the powerful influence of Iron as a tonic, when administered in the state of a Protoxide ; and I was aware that it exists in this state in the Hydriodate, into which the Ioduret changes when it is dissolved in water. I supposed that, if this active oxide thus combined with Hydriodic acid were taken into the circulation, a circumstance extremely probable, the Hydriodate, meeting with an alkali, would suffer decomposition, and thus the two compounds would be enabled to exert their separate influence on the system, in a form and under circumstances the best fitted to render them efficient.

Now, there is much reason for supposing that the Hydriodate is decomposed in the system, and that the Protoxide of Iron, and the

* It is scarcely necessary to remark that metallic Iron is insoluble, and that Iodine requires seven thousand parts of water for its solution.

Alkaline Hydriodate which result, exert their separate influence on the nervous and the vascular organs; the former operating as a tonic on the vital solid, and the latter as a powerful stimulant to the capillary system. Or, if we take another view of the subject, keeping in recollection the striking influence of Chlorine on the solution of the Hydriodate out of the body, and knowing, also, that this agent is evolved in the course of the circulation, it is possible that the Protoxide of Iron, which is set free by the decomposition of the Hydriodate in the system, may be converted into the Proto-muriate of Iron, whilst the Iodine is evolved in a free state; and thus the same tonic and stimulant influence would be as powerfully exerted as in the former case. If either of these theories of the manner in which the Hydriodate operates be admitted as correct, the class of diseases in which it is likely to prove useful at once present themselves: namely, those in which the capillary system requires to be stimulated and the tone of the habit to be maintained, or to be brought up to the healthy standard:—Scrophulous affections, Tabes Mesenterica, Chlorosis, incipient Scirrhus, Rickets, Amenorrhœa, Bronchocele, Atonic Dyspepsia, and all conditions of direct debility.

No preparation of iron, with the properties of which I am acquainted, combines in itself the requisite for answering the indications to be

fulfilled in these diseases so completely as the Hydriodate of the Protoxide of Iron: but, in order to verify this opinion, and to elucidate the theory of the operation of the Hydriodate, I made a series of experiments on myself, which enabled me to draw the following results respecting its physiological action.

When taken in doses of from three to five grains, the Hydriodate of Iron makes no sensible impression on the stomach, although it sharpens the appetite and improves the digestive function: it seems to stimulate moderately the intestinal canal through its entire length, as it opens the bowels; and, whilst it produces the black colour of the alvine discharges characteristic of all the preparations of iron, it corrects their fœtor. When it does not affect the bowels, it augments the action of the kidneys, increasing the flow of urine; and, if the solution be taken two or three times a day, for several successive days, the presence of both the Iodine and the Iron can be readily detected in the urine. The temperature of the skin is moderately elevated, and the insensible perspiration increased. On one occasion, having taken ten grains for a dose, it almost immediately caused an uneasy sensation at the epigastrium, accompanied with nausea that continued for several hours; and a slight degree of headache. These symptoms were relieved by a copious stool, which was perfectly black. Two hours after swallowing

the medicine, a large quantity of urine was discharged; and on being tested, it displayed the presence of both the Iodine and the Iron*. Such being the influence of the Hydriodate of Iron, in a healthy condition of the body, my next object was to ascertain its value as a therapeutical agent. The following cases contain the result of my observations on this subject.

a. Employment of the Hydriodate of Iron in strumous diseases. I have already stated that this Hydriodate is indicated in all diseases connected with, or depending on, general debility, and more especially with an atonic condition of the capillary system. It is unnecessary to say that Scrophula, as a chronic affection, in all the varieties of form which it assumes, is of this description: the digestive, as well as the whole of the glandular, and the assimilative organs are in an inactive state; thence the employment of both stimulants and tonics is indicated: the chief question is with regard to their selection. Mercurials, the Alkalies and their Carbonates, the Murates of Baryta and of Lime, the Sul-

* The best method of detecting the presence of the Hydriodate of Iron in the urine, is to put some of the latter into a glass, and to add a little mucilage of Starch. As soon as this mixture is cold, if a little chlorine gas be poured upon its surface, the blue colour of the Iodide of Amidine will instantly display itself, if the Hydriodate be present. The Iron is readily detected by an aqueous solution of galls.

phate, the Muriate, and the Carbonate of Iron, the Sulphate and Carbonate of Zinc, Iodine, Hydriodate of Potassa, Sarsaparilla, and a long list of vegetable tonics and stimulants have been more or less successfully employed as antiscrophulous remedies: but, undoubtedly, none of them have afforded such satisfactory results as Iodine. The powerful influence of this substance on the absorbent system was observed soon after its discovery; and it naturally led to its employment in strumous diseases: but its reputation was not confirmed until an extensive series of experiments and observations, by M. Lugol, demonstrated, in the most convincing manner, its powers of controuling the strumous diathesis, and curing Scrophula when present. Notwithstanding the advantages, however, which result from the use of Iodine in this class of diseases, whether it be administered in its simple form, or in that of Tincture; or, as Lugol prescribes it, in water, in which it is rendered soluble by Hydriodate of Potassa; or, whether the simple solution of this Hydriodate itself be the form in which it is employed; it operates solely as a stimulant. In all of these forms, like Mercurials and Arsenical preparations, Iodine is apt to accumulate in the system, and, in large doses, to act as a topical acrid on the stomach, causing pain in that organ; whilst its irritant influence on the nervous system is indicated by headache, vertigo, tremors; and,

under some circumstances, by hysterical symptoms. Besides, when long continued, the use of all these preparations of Iodine is more or less followed by great weakness and emaciation. When such symptoms occur, if they be not sufficiently important to require that the use of the remedy be discontinued, tonics are the means by which they are most effectually relieved: indeed the combination of Iodine with a tonic, when admissible, is found to be the most effectual prophylactic of these symptoms, in cases in which the susceptibility of the nervous system renders it likely that the Iodine might display its deleterious influence on the habit. As the Hydriodate of Iron possesses both the stimulant properties of the Iodine, and the tonic powers of the Protoxide of Iron, the probability that it might produce all the beneficial, without the deleterious, effects of Iodine, was presumed; and I was, therefore, induced to order it in *scrophulous* affections. The results that have followed its administration have been such, that I have no hesitation in regarding it a most valuable addition to the means which we already possess of treating the *chronic* forms of these diseases.

In prescribing the Hydriodate of Iron, in any strumous affections, it is necessary to direct our attention to the ordinary condition of the habit of the patient, so as to ascertain whether the disease have been en-

grafted on a weak and attenuated frame, or whether it is combined with plethora. In the former case, the Hydriodate of Iron is peculiarly indicated; and it is in such that I have found it most beneficial:—in the latter, the propriety of administering it depends much on the condition of the alimentary function. If the tongue be at all red and glazed, indicating a highly irritable state of the stomach, with some degree of sub-acute inflammation of the mucous membrane; then, the exhibition of the Hydriodate of Iron would not only be injudicious, but extremely hurtful; nevertheless, after due evacuant medicines have been employed, I have found it to be one of the best means of completing the cure, and of communicating that vigour to the system which is necessary for enabling it to withstand the future influence of the exciting causes of the disease.

The following cases are selected from many of a similar nature. I have purposely avoided entering upon the separate detail of a greater number, as it would only involve the subject in useless repetition.

CASE I.

A young lady, fourteen years of age, was sent home from a boarding school, on account of swellings of the lymphatic glands of the

neck, accompanied with a slight cough and some degree of fever. The physiognomical aspect of the patient was that which is generally regarded as marking the existence of the strumous diathesis. She was tall for her age, with the joints somewhat enlarged, and the muscular frame soft and flabby: her hair was light and silky; her eyes blue, full, and protruding; her skin white, thin, and smooth; and the red of the cheeks circumscribed, not unlike that of hectic. She was of a quick, irritable temper; but nevertheless, indolent; had been delicate from her birth, often suffering from catarrh and other febrile attacks; and in winter she rarely escaped an attack of chilblains. The glandular swellings in the neck had appeared five months before I saw her; but, as the progress of their enlargement was slow, she had been only two months under the care of the medical attendant of the school. I was not informed of the nature of the treatment which had been pursued; but it appeared to have been productive of little benefit; and, as two of the tumors had begun to suppurate, and a cough had supervened, it was thought advisable to send her home.

I first saw her on the eighth of August, 1833. There was a chain of indurated glands extending from below the middle of the lower jaw to behind the ear on the right side, two of them in a state of active suppuration; whilst one tumor,

nearly the size of half of an egg, rose, free from any external redness, directly under the angle of the left jaw. Her general health was greatly disordered; the pulse was small, but sharp and brisk; the tongue was redder than natural, and covered, at the back part, with a slimy fur; the bowels were relaxed; and the catamenia, which had occurred, for the first time, a month after the swellings began, had not again appeared. From the sound of the voice, I suspected that the tonsils were affected; and, on examination, I found that they were inflamed and considerably enlarged. My patient complained of almost continued headaches; great prostration of strength; and, since the cough had supervened, she was still more weakened than before by morning perspirations. Under these circumstances, my first object was to moderate the inflammatory action, to allay the irritability of the digestive organs, and to improve the secretions: for which purpose, I ordered her to be cupped between the shoulders, and to take the following medicines:

R Hydrargyri cum Creta, gr. xii.

Pulveris Ipecacuanhæ compositi, gr. x.—M. ut fiat Pulvis hora somni quotidie sumendus.

R Olivæ Olei, f3iss.

Acaciæ Gummi pulveris, 3ss.

Hydrocyanici Acidi, m. iii.

Aquæ Distillatæ, f3viiiiss.

Sacchari albi, gr. x.—M. ut fiat haustus ter die sumendus.

Her diet was ordered to be light, but nutritious; to consist chiefly of preparations of milk, morning and evening, with a moderate allowance of mutton or poultry once a day, and well-boiled vegetables. Wine and all fermented liquors were interdicted. Friction was directed to be applied along the course of the spine, and over the abdomen; and exercise in an open carriage was recommended to be taken daily, except when the wind was from the east, or the north.

August 9th.—One of the tumors was opened to-day, and syringed with a solution of Sulphate of Zinc. The powder and draughts were ordered to be continued.

August 17th.—The same plan of treatment has been pursued, since the 9th instant, with the addition of the application of four leeches two days ago, on account of the tumor on the left side becoming tender: the occasional interposition of a saline purgative has been also necessary. The condition of the digestive organs is much improved; the tongue is nearly natural; and the cough has ceased. The enlarged glands, however, are nearly in the same state as when I first saw the patient, except that the other suppurating tumor has been opened. As the ulcer, which succeeded the opening of the first tumor, is very irritable and painful, let a Hemlock and Foxglove poultice be laid over it.

Pergat in usu pulveris, addendo Aloës pulveris, gr. iv.

R Ferri Iodureti, gr. iii.

Aquæ Distillatæ, f3 xi.

Aurantii Tincturæ, f3i.—M. ut

fiat haustus ter die sumendus. •

R Iodinii, 3ss.

Potassæ Hydriodatis, 3iss.

Adipis purificati, 3i.

Tere diligenter ut fiat unguentum;—pauillum tumoribus cervicis, ope fricationis, mane et vespertino, quotidie applicandum.

In ten days, the mouth became tender; consequently the powder was discontinued. The bowels were then regulated by the occasional administration of a five-grain Aloetic pill; and the other parts of the treatment were pursued, with little variation, for two months, during which time the catamenia returned, and the improvement in health and strength was progressive and striking. The tumor on the left side suppurated; but all the ulcers rapidly cicatrized; whilst the swellings gradually softened and dispersed; and, on the 20th of October, my patient returned to school in a much improved state of health.

CASE II.

Miss ———, 22 years of age, of a full, leucophlegmatic habit of body, the daughter of a dis-

tinguished member of the Scottish bar, had been ill for three years; and, during the greater part of that time, confined either to her bed or sofa, under medical management. Little advantage having been derived from the treatment pursued in Edinburgh, Miss —— was sent to London for further advice, and placed under the care of Dr. Warren and Sir Charles Bell: and, six weeks afterwards, her father having expressed a wish that I should see her professionally, I met these gentlemen in consultation.

I had seen something of the commencement of the case, and had heard a good deal of its progress. It had, at first, been considered an affection of the knees, as pain and swelling attacked these joints; and it was, accordingly, treated as such with leeches, blisters, fomentations, and rest, without much regard to the general state of the health; which, however, after some time, began to display obvious symptoms of breaking up, and demanded attention. The pains and swelling left the knees; and were succeeded by headache, and pains in the left side and palpitations; the catamenia disappeared; and the body enlarged, with an œdematous aspect and swelled legs. The prostration of strength was so great as to cause an almost total disability to maintain the erect position of the body, or to walk. It was,

now, suspected that the spine was affected : further rest was enjoined, and means, of the nature of which I have not been informed, were adopted to bring up and to sustain the powers of the habit; and they so far succeeded, that Miss —— was enabled, with the assistance of two people, to walk from her bed-room to the drawing-room, at the end of two years. The catamenia, also, returned at distant and irregular periods. Under these encouraging circumstances, however, Miss —— gained no more ground: her knees sunk under her when she attempted to walk; the slightest bodily exertion exhausted her; and her bowels became so torpid that it was necessary to act upon them, every other day, with Croton oil. Miss —— arrived in London, in this condition, except that her strength was slightly improved by the sea voyage.

The view of the case which was taken by the distinguished men under whose medical care Miss —— was placed, was opposed to that of the Edinburgh physicians. They were satisfied that there was no disease of the spine; and they attributed most of the symptoms which the history of the case detailed, and which were then present, to a morbid condition of the digestive organs, acting sympathetically on the nervous system and producing Hypochondriacal feelings. To the latter, in particular, they ascribed the supposed inability to move, the

tremors which accompanied any attempt to walk, much of the depression of spirits under which Miss —— was evidently suffering, and some hysterical appearances that now and then displayed themselves. They recommended the bowels to be regulated by Enemas containing a portion of the Assafœtida mixture ; prescribed a tonic, with Ammonia and Valerian, and daily exercise in a carriage. They also urged Miss —— to take advantage of that amusement for the mind which London so amply affords to a stranger. Under this plan of treatment, a temporary improvement took place ; but, after a few weeks, the state of Miss ——'s health again remained stationary, until the week before I was consulted, when she lost ground in every particular, and declared that, if not worse, she was certainly not better than when she left home.

On visiting my patient (August 6th, 1833), I found her in a very distressed condition of health. She stated that she was scarcely able to move from the sofa on which she was seated ; her face was swelled and bloated, and the eyelids were so œdematous as nearly to close both eyes. Her breathing was laborious ; and she spoke almost in a whisper ; the tongue was loaded ; the bowels were torpid to a great degree ; and the secretion of urine was scanty and high coloured. She complained of pain in the left side under the breast ;

a sensation of weight in the head; and an overpowering languor, and general oppression of spirits. She said that she slept soundly, and indeed could sleep all day. The pulse was slow, feeble, and compressible; and the catamenia had not occurred for seven weeks. She had lost nearly all confidence in medicine; and, indeed, this was not surprising, when we consider the length of time she had been suffering under this disease.

Reflecting upon the nature of the symptoms which have been described, and knowing something of the constitution of Miss ——, I was disposed to attribute much of what she suffered to deficient action in the capillary system, brought on by a general state of defective tone, producing also that morbid irritability and consequent augmented sensibility to impressions in the nervous system, which so strongly characterised the case. The two indications to be fulfilled appeared to be to give tone, and at the same time to excite the action of the capillaries; and, therefore, I conceived that it was a case admirably adapted to prove the value of the Hydriodate of Iron. I explained my views to Dr. Warren and Sir C. Bell, who at once agreed to give the medicine a fair trial; and they also accorded with my proposal to discontinue the use of the enemata; and to try, instead of them, a combination of Blue pill and Extract of Aloës.

It was true that much more powerful purgatives had been administered without any advantage; but I was satisfied that, if the action of the glandular system was improved, and the habit invigorated, the bowels, sharing the improvement in tone of the system, would soon operate with very little assistance from purgatives. The following prescription was therefore ordered:

R Ferri Iodureti, gr. ii.
 Aquæ Distillatæ, ʒxi.
 Aurantii Tincturæ, f ʒi.—M. ut
 fiat haustus bis die sumendus.

R Pilulæ Hydrargyri submuriatis compositæ, gr. iv.
 Aloës Extracti, gr. vii.
 Ipecacuanhæ pulveris, gr. i.
 Aquæ q. s. ut
 fiant pilulæ iii æquales—horâ somni quotidie sumendæ.

The trunk of the body was directed to be sponged with tepid salt and water, every morning, while the extremities were kept warm in bed; the diet to be mild but nutritive; and the use of wine and malt liquor to be discontinued. The patient was recommended to take regular exercise in an open carriage, until she should feel that she was able to bear the fatigue of walking; and, when the weather would not permit exercise to be enjoyed in the open carriage, I

requested that the body should be briskly rubbed, for half an hour at a time, twice in the day.

The beneficial influence of the Ioduret was soon obvious: in four days every appearance of œdema had disappeared; the urinary secretion was greatly augmented in quantity, and had assumed a more natural appearance; the tongue was cleaned; and the complexion and entire habit had taken on a more healthy aspect. In the course of ten days the powers of the stomach were improved; and the bowels acted regularly twice in the twenty-four hours. In less than fourteen hours, from the time of taking the first dose of the Ioduret, the black colour of the alvine excretions demonstrated that the Iron as well as the Iodine was exerting its full influence on the system; and, in a few days, the tinge of red which appeared on the cheek of the patient displayed its influence both on the circulation, in the capillary vessels, and on the chemical characters of the circulating fluid. In three weeks Miss —— was able to walk for a short distance with ease and comfort to herself.

On the 16th of September, she returned to Edinburgh, greatly improved in health, and in full confidence of a complete recovery. She was recommended to try the sea-bathing, as long as the weather would permit; and,

during the winter, to employ the sea-water shower bath.

Miss —— continued to improve in health till the beginning of November, when I received a letter from her of which the following is an extract :

“ Whilst I was at P——, I was very well, and had gained so much strength as to enable me to walk twenty minutes twice a day; to drive two or three hours; and be with my family and friends the remainder of the day, without feeling any fatigue : aperient medicine was quite unnecessary ; and I never felt in the least cold. One night lately, however, I caught cold, and have not been so well since. I went to —— for a fortnight, but was much disappointed in finding that I was still getting worse. I can now (3rd of November) scarcely walk for ten minutes without fatigue, and feel equally overcome if I drive for more than an hour : indeed I am so fatigued as to be unable to do any thing else during the rest of the day. I also, daily, require a little opening medicine. Will you inform me whether, under such circumstances, I ought to continue the use of the cold sponging ? I have never increased the Ioduret above three grains : the dose has been varied from two to three; and I have invariably felt better for a day after the increase to the

three grains.” “ Ought I to increase the Ioduret ?”

In reply to this letter, Miss —— was desired to discontinue the use of the Ioduret for a week; and, then, to recommence it. She soon, again, improved under its use; and in a letter, dated 2nd of April, 1834, she gives the following account of her health: “ My health is perfect: my walks are above three miles; and I never feel ailments of any kind. I have, indeed, remained vulgarly strong; and have even felt no injury from exposure to heavy showers, when in an open carriage, that have colded others.”

CASE III.

A boy, five years of age, of a fair complexion, delicate relaxed frame of body, and of so irritable a state of habit that the least irregularity of diet was, frequently, followed by a vesicular eruption of the skin, very similar to Pompholyx, was placed under my care for the improvement of his general health, whilst he was attended by my friend Sir Charles Bell, on account of a scrophulous enlargement and ulceration of the third finger of the right-hand, and an indolent swelling on the leg of the same side. The health of this young gentleman had suffered severely from repeated attacks of acute bron-

chitis; after one of which, the disease of the finger first shewed itself: indeed there could be no doubt that both the disease of the finger and the tumor in the leg depended on constitutional causes. His appearance, however, did not indicate the presence of much disease; yet he was labouring under some degree of fever, which always increased in the evening: he felt languid and perspired profusely at night; he was also morbidly susceptible of the slightest atmospheric changes.

A consultation was held, and it was agreed to try the Hydriodate of Iron, and the topical application of Iodine. The solution of the former was, therefore, ordered to be taken in doses equivalent to two grains of the Ioduret, three times a day; and the affected finger to be dressed with the following ointment:

R Iodinii, ʒss.
 Potassæ Hydriodatis, gr. xxiv.
 Adipis præparatæ, ʒi.
 Tere optime ut fiat unguentum.

He was ordered to be drenched with salt and water, by means of the portable shower bath, every morning; to have a light but nutritive diet; and to be as much as possible in the open air.

Under this plan of treatment, the boy's health rapidly improved; the night perspirations have left him; he is comparatively strong;

and although the finger is only moderately reduced in size, yet the ulcer has cicatrised; the swelling on the leg has nearly disappeared; he has gained in flesh; and, with these exceptions, he may be considered in perfect health.

In these cases, and in others of a similar nature, the influence of the Hydriodate of Iron on the capillary system, and the digestive and assimilative organs, has been most striking; whilst no general attenuation, nor the absorption of healthy glandular organs, such as not unfrequently attends the use of Iodine, have been observed.

CASES IV, V.

I have much satisfaction in publishing the following letter, from my friend Dr. Cox, in confirmation of the results obtained from the use of the Hydriodate of Iron in my own practice.

MY DEAR SIR,

I have given the Ioduret of Iron* in nume-

* Although the term Ioduret is used by Dr. Cox, yet as this preparation can only be used in solution, the Hydriodate is meant.

rous cases, and with such excellent effects, that I consider it a very valuable addition to the *Materia Medica*.

A young lady, residing in Baker Street, of a strumous habit, is subject to occasional default of the powers of the constitution, with loss of appetite and every symptom of debility. In addition to these symptoms, she suffered in the spring from irritable cough, which, with other circumstances, led me to fear that there was incipient tubercular disease in the lungs. As she had always, formerly, been benefited by Chalybeates, I thought it a fit case for the exhibition of Ioduret of Iron, which she took in the dose of three grains, three times a day, with the happiest result. She quickly gained strength; the cough diminished, and then entirely ceased; the appetite returned, and the recovery was exceedingly rapid.

I have given it, in many cases, in the Western Dispensary, in scrofulous children affected with eruptions about the head, in which cases the Ioduret, combined with the use of Iodine ointment, externally, is a most valuable remedy. One little child, now under my care, aged about four years, suffering from extreme debility, was not able to walk or sit upright; the glands of the neck were enlarged; an eruption had spread over the head in some parts, consisting of small suppurating tumors, which burst

and discharged a thick lardaceous matter, and others covered with thick scabs: the appetite and strength were gone, and the child appeared to be sinking. The Ioduret of Iron, in this case, really wrought marvels. The head was poulticed; ten grains of the Ioduret were given three times a day; and as soon as there was sufficient vis vitæ, the cold bath was employed. The child is now quite recovered. I trust this will suffice to shew the good effects of the Ioduret of Iron in scrofulous debilitated constitutions. In one other form of disease, always intractable, viz. Strumous Ophthalmia, I have exhibited it with marked benefit.

I am, my dear Sir,

Yours very faithfully,

J. C. Cox.

33, Montague Square.

July 3.

b. Cases illustrative of the Influence of the Hydriodate of Iron in Chlorosis.

The symptoms characteristic of Chlorosis; namely, the almost exsanguine aspect of the patient; the œdematous state of the eyelids; the deranged condition of the digestive organs, de-

noted by morbid appetite, tainted breath, and an œdematous, pale, loaded tongue: the recurrent headache, occasional pain of the side, palpitation of the heart, and cough which sometimes supervenes; and the pale, scanty, if not total disappearance of the catamenia; pointed out this disease as one likely to be materially benefited by the administration of the Hydriodate of Iron. The advantages which I had always, however, previously found to follow the employment of the Sulphate of Iron, in combination with the pill of Aloës and Myrrh, made me pause before changing my method of treating this disease: but the following case (VI), evidently engrafted upon a strumous habit, having resisted the ordinary remedies, induced me to try the Hydriodate of Iron; and, both in that instance, and in several other cases, the results have been such as to induce me to regard it as the best preparation of Iron that can be employed in the Chlorotic affections of strumous constitutions. My own observations in this respect are further confirmed by the two other subjoined cases (VII, VIII), which were treated by Dr. Charles J. R. Williams, of Half-moon Street. In the note, which I had the pleasure of receiving from Dr. Williams, that gentleman adds: — “The two accompanying cases are the more satisfactory, because the treatment was not complicated, and depended for its efficacy almost solely on the remedy in question.

CASE VI.

Mary —, nineteen years of age, a patient in the Dispensary of the University of London, has been gradually declining in health for the last five months. She, now, complains of great languor; extreme depression of spirits; defect of appetite; a torpid state of the bowels; recurrent headache, coming on generally twice in the twenty-four hours; embarrassed breathing; and a disposition to hysteria, denoted by the *globus hystericus*, and great nervousness. The whole skin is of a pale sallow hue, the lips nearly white, and the expression of the countenance languid and anxious. The menstrual discharge has not appeared for two months; and was previously extremely scanty and pale coloured. She says that she, nevertheless, sleeps soundly, but is unrefreshed in the morning; and, long before the day is half spent, her ankles and feet swell to a degree which prevents her from wearing her shoes. The bowels are irregular; most commonly costive, but occasionally they are purged. She is a straw plaiter; and I am inclined to ascribe her disease to her sedentary habits, a strumous diathesis, and a natural delicacy of constitution. The following medicines were prescribed.

R Pilulæ Submuriatis Hydrargyri compositæ, gr. xx.
Aloës Soccotrini Extracti, ðiv.

Mucilaginis Acaciæ, q. s. ut fiant
pilulæ viginti æquales. Sumantur i horâ somni quotidie.

R Ferri Iodureti, ʒi.

Aquæ Distillatæ, f ʒiv.

Solve et cola. Sumatur cochl. med. i ter quotidie.

The patient was ordered to take as much exercise in the open air as her strength and circumstances would admit; and to let her diet be mild, but as nutritious as she could procure.

She pursued this plan for a month, gradually increasing the dose of the solution to two spoonfuls, equal to four grains of the Ioduret: no other medicines, with the exception of an occasional purgative of Salts and Senna, were prescribed. In less than a week, both the headaches and the languor disappeared; her lips and general complexion rapidly acquired a healthy hue; the catamenia returned in the middle of the fifth week: and when she left the Dispensary, she was apparently in as good health and spirits as could be desired.

CASE VII.

Communicated by Dr. WILLIAMS.

A—— L—— æt. 24, had been out of health for more than two years, having menstruated only twice during that period, and suffering much from weakness, lassitude, loss of appetite, shortness of breath, pain in the left side, and palpi-

tation, to which, latterly, had been added, a cough with expectoration. She had been under the care of several eminent practitioners, but had derived only partial and temporary relief from their prescriptions. She was recommended to go to the sea coast, which she did with considerable improvement of her health; but she became worse immediately on returning to London.

When I first saw her (March 1st, 1834), her face was perfectly blanched, there being no traces of red blood in her cheeks or lips; her breath was so short, and palpitation so distressing, that she was unable to attend to her employment (that of upper housemaid in a large establishment); her cough was very troublesome; the pain constant in her left side, which was so tender that she could not bear the least pressure on it. She had no relish for nourishing food, and was fatigued by the least exertion. The bowels were generally torpid, and she suffered much from leucorrhœa. The tongue was pale and clean; the pulse 96, weak but sharp. The contractions of the heart were abrupt and spasmodic, as in irritative palpitation; the first sound being accompanied by a bellows' murmur after any exertion. A mucous rhonchus was present in several parts of the chest, but the sound of respiration and of percussion was generally natural. There had

been no sign of the catamenia for eight months; the last appearance, an imperfect one, having occurred when she was in the country.

In considering that defective sanguification was at the root of all these symptoms, and under the impression that the union of powerful alterative with tonic properties in the Ioduret of Iron was more likely to rectify the disordered functions, than any other combination of remedies that could be devised, I directed two grains of this medicine to be given in distilled water, three times a day. The bowels were to be regulated by a teaspoonful of Castor Oil daily. Friction, twice a day, was ordered to be applied to the legs and thighs. A glass of wine to be taken at dinner; and animal food to be allowed, if the appetite should admit of it.

The improvement from this plan was immediate and progressive. The cough gradually ceased; the appetite returned; the respiration became more free; the palpitation less urgent; and the pain and tenderness of the left side, which were so acute as to appear to demand depletory measures, were daily diminished. The pulse became fuller and slower, and lost its sharp, irritative character; and the lips and cheeks began to show red blood in their capillaries. It is unnecessary to dwell on the detail of these improvements. The only change in the treatment was the omission of the Castor

Oil; the bowels being sufficiently free without it. After three weeks under this plan, she said that she felt perfectly well. The functions were, in fact, quite natural; and the only remaining ailments were, some shortness of breath on going up stairs, and a pain in the back. The leucorrhœa had ceased. She was directed to wear flannel drawers, and to continue the Ioduret; and, in the beginning of April, the catamenia returned moderately, and without pain. She afterwards took the medicine only once a day, for a week; and then discontinued it. In the beginning of May, she called on me; complaining of a slight recurrence of the old symptoms, with constipated bowels. She resorted to the medicine in the same dose, and was ordered to take five grains of the *Pilulæ Aloës c. Myrrhâ* every night, until the menses should return. This happened in the course of a week, and she has been quite well ever since.

CASE VIII.

Communicated by Dr. WILLIAMS.

E—— T——, æt. 22, quite chlorotic in appearance; suffering from symptoms very much resembling those of the preceding case, with the addition of severe headaches; derived almost complete relief from the Ioduret of Iron, in the dose of two grains, sometimes twice and some-

times three times daily. Before taking it, she had only menstruated once in her life, and then unnaturally. She is still irregular, but there has been an appearance of a more healthy character three times during the use of the medicine; and, from the great improvement in the general health, there is good reason to hope that the uterine function will eventually be established. She had, for five years previously, been trying all sorts of remedies with little or no effect.

c. Cases illustrative of the employment of the Hydriodate of Iron in Carcinomatous Diseases.

In reflecting on the nature of Carcinomatous affections in their earliest stage, and the influence which Iodine and its compounds exert on the nutritive functions of glandular organs, I conceived the idea of trying the Hydriodate of Iron in such cases. I was confirmed in my ideas, from knowing that some benefit had been derived from the combination of means calculated to diminish sensibility in the diseased organ, at the same time acting on the capillary system, to promote absorption and secretion, whilst the tone of the habit was supported. As the means of effecting these objects were found in the properties combined in the Ioduret, I expected that it might be so administered in conjunction with sedatives, as

to produce a salutary change in the nutritive function of the diseased organ: and thus that the progress of the disease might be at least retarded, if a complete cure could not be effected. An opportunity of proving the accuracy of my reasoning, with respect to this influence of the Hydriodate of Iron on incipient Carcinoma, was at this time fortunately within my power in the following case, in which sedatives and Iodine in various forms had been employed, for upwards of seven months, without any permanent advantage.

CASE IX.

Mrs. M——, a married woman, forty-six years of age, who had never been pregnant, and in whom the Catamenia had finally disappeared, consulted me for a complaint in both mammæ, which had for three months been gradually increasing, and greatly alarmed her, although she had not taken any medical opinion respecting its nature. She informed me, however, that some female relations to whom she had, a few days before, mentioned her sufferings, had assured her that the disease was Cancer. She stated that the symptoms, which were at first slight, were much increased in severity, and now occupied the whole of her attention. They consisted of lancinating, intermittent pains in both breasts, stretching down the arms, which

were somewhat œdematous as far as the wrists : she was feverish, restless and uneasy at night ; her appetite was uncertain ; her bowels were irregular, but generally confined ; and she lamented that she had become extremely irritable, and that the most trifling circumstances often caused ebullitions of temper which she could not controul.

On examining the state of the affected organs, I found a strong, irregular, painful, nearly fixed tumor in the right breast, immediately below the nipple, and extending towards the axilla, where there was a small immoveable tumor, about the size of a hazel nut, and tender to the touch : in the left breast there was a smaller, less indurated and irregular tumor : it was, also, more moveable than that in the right breast, could be handled without occasioning much uneasiness ; and it was unaccompanied with any swelling in the axilla. The tongue indicated a deranged condition of the digestive organs ; the complexion was rather sallow, and the skin harsh. She complained, also, of weakness.

From the above detail of the symptoms, and the result of my examination of the affected organs, I had no hesitation in regarding the disease as Carcinomatous ; although I endeavoured to allay the anxiety of mind of my patient, by diverting her thoughts from the con-

sideration of such a circumstance. The intermittent character of the pain induced me to hope that the disease was still in its incipient state; and that, although the deposition of Carcinomatous matter was going on, yet, no organic change of great moment had taken place; consequently that something might yet be done to retard its progress. She applied to me on the 30th of August 1832: the following was the plan of treatment laid down at that time. She was ordered to take two pills every night, and one every morning, each containing one grain of the Blue pill and two grains of the Extract of Hemlock: to apply, night and morning daily, by gentle friction to the tumefied parts of the breasts, an ointment composed of a drachm and a half of Ioduret of Lead and two ounces of Lard. With the view of diminishing sensibility and vascular action in the affected parts, she was, also, ordered to foment the mammæ with a decoction made with four drachms of the dried leaves of Foxglove and two ounces and a half of Poppy-heads; and to leave the fomenting materials on the breasts, in the form of poultices, during the night. Her diet was restricted to milk and farinaceous matters.

21st September.—Little benefit had been derived from the foregoing plan of treatment, the pains in the mammæ, and those along the arms, were even more severe, acquiring a re-

mittent character, at least the intermissions were less marked, and shorter than before. In consequence of this condition of the diseased organs, the quantity of the Extract of Conium was doubled, and half a drachm of Iodine added to the thirty pills: and she was directed to take two of these every morning and noon, and three at bed-time every night.

12th October.—Her strength having suffered, and the irritability of the system increased, the Iodine in the pills was omitted, and a drachm and a half of Sulphate of Quinia substituted for it; whilst the Extract of Hemlock was augmented to four drachms; so that she might take six grains for a dose four times a day. Half a drachm of Morphia was added to the ointment. Six leeches were ordered to be applied over the tumors in each breast every second day; and the anodyne fomentation and poultice continued. The plan of diet, which she had rigidly observed for the last two months, was recommended to be adhered to.

This mode of proceeding, both as respected medicine and diet, was continued, with little variation, for three months; during which time the pains very much abated, and the intervals were greatly lengthened; but the tumors were not much reduced. Her complexion was also improved, and her strength greatly augmented.

5th February, 1833.—On account of the partial improvement which has just been described, the use of the Sulphate of Quinia was discontinued, the dose of the Extract of Hemlock was reduced one half, and ten grains of the Binioduret of Mercury added to the pills, according to the following formula :

R Hydrargyri Pilulæ, gr. xxx.
 ———— Biniodureti, gr. x.
 Conii Extracti, ʒii. simul contundantur
 et moles dividitur in Pilulas xxx æquales.
 Sumantur ii mane, meridie et horâ somni quotidie.

The leeches were directed to be applied once in eight days only; but the fomentation and poultice to be daily employed.

22nd February. — In consequence of exposure to cold and damp, Mrs. M—— was severely attacked with rheumatism; and, consequently, was obliged to suspend her medicines for six weeks. In the mean time, although an antiphlogistic course was pursued, yet, the pains in the breasts again greatly increased, and the indurated state and size of the mammary tumors became nearly equal to what they were when I first saw her.

14th of April. — The following pills were prescribed; the leeches were ordered to be applied every other day, and the fomentation and poultice to be again used every evening.

R Iodinii, ʒiss.

Rhei Pulveris, ʒii.

Conii Extracti, ʒiii.

Contundantur simul et dividitur moles in pilulas lxx, æquales.

Sumantur ii mane et meridie, et iii horâ somni quotidie.

It is unnecessary to detail the various changes in the symptoms, and the consequent modification of the treatment, from this period until the commencement of December. The severity of the disease was abated, but the malady itself remained unsubdued; and the strength had evidently suffered, either owing to the constant depletion, or the great anxiety of mind under which Mrs. — still laboured, respecting the issue of the disease. I now, therefore, determined to discontinue altogether the Iodine, which I conceived increased the irritability of the habit, and to try the influence of a tonic, in conjunction with the Conium, and topical Anodynes; at the same time, leaving off altogether the depleting measures.

10th of December, 1833. She was ordered the following pills and draught.

R Rhei Radicis Pulv. ʒii.

Conii Extracti, ʒiii.

Aquæ Distillatæ, q. s. ut

fiant pilulæ lx æquales.

Sumantur i mane et meridie, et ii horâ somni quotidie.

R Ferri Iodureti, gr. iii.
 Aquæ Distillatæ, f 3x.—M. ut
 fiat haustus bis quotidie sumendus.

The beneficial result of this change of medicines far exceeded my most sanguine hopes: the pains of the mammæ rapidly abated, and soon entirely vanished; the tumors became scarcely perceptible; and Mrs. M —— again got into flesh, and regained her former healthy complexion, her strength, and her spirits. It is now (July 10th, 1834) three months since she discontinued the use of medicine; and it is gratifying to be able to say, that she continues free from every pain and uneasiness, and is apparently in good health.

I am fully aware, in offering this case as an instance of the advantage of the use of the Hydriodate of Iron in Carcinoma, that little reliance can be placed on a solitary case; but I am desirous that it should be tried by others. In none of the numerous diseases to which humanity is liable, is a fatal termination so probable as in Cancer: at the same time, whilst the deposition of the Carcinomatous matter is going on, and the disease is yet merely local, there is no reason for refraining from trying means that seem to promise a

favourable issue. It would be ridiculous to regard the Hydriodate of Iron as possessed of any specific virtues in incipient Cancer; nor do I consider that it is likely to prove useful until the vascular action and the morbid sensibility of the diseased organ be reduced. A tonic is then, generally, indicated, and I do not hesitate to recommend the Hydriodate of Iron as one more likely to fulfil every indication required than any other. I must not, however, be misunderstood; the curability of every malignant disease depends altogether on the period of its existence; and I am of opinion, that it is in the early stage only of Carcinoma, that the Hydriodate of Iron can prove, in any degree, beneficial.

d. Cases illustrating the salutary effects of the administration of the Hydriodate of Iron in syphilitic cachexia and eruptions.

I was induced to prescribe the Hydriodate of Iron in cases of Cachexia and eruptive diseases evidently connected with, or dependent on a Syphilitic taint of the habit, partly from the salutary influence which it displayed in the first of the following cases, communicated to me by my friend Sir David Barry, and partly from reading a paper by Dr. Williams, published in

the Medical Gazette, on the success which had followed the administration of the Hydriodate of Potassa in similar affections.

The two cases which were treated by myself are a part of several on which the Hydriodate has been fairly tried at the Dispensary of the London University. As the Hydriodate of Potassa was given at the same time, it may be said, that it is difficult to ascertain how much is due to the Hydriodate of Iron; I can only say, in reply to this remark, that, in some cases treated by the Hydriodate of Potassa alone, although recovery took place, yet the improvement was by no means so rapid, nor so decided, as when both preparations were combined. I am willing to admit, also, that the salutary influence of the Hydriodates was aided by the powerful alterative properties of the Binioduret of Mercury. It is, nevertheless, necessary to remark, that no mercurial action on the system was evident in these cases; a circumstance which I attribute to the tonic influence of the Hydriodate of Iron; for in cases in which the Binioduret was given, either alone or in conjunction with the Hydriodate of Potassa, the mercurial action has been rather more quickly produced, and the irritability of the system sooner awakened, than when the usual mercurial remedies are administered.

CASE X.

*Chronic Ulceration of the Posterior Fauces cured by
Ioduret of Iron.*

Communicated by Sir DAVID BARRY.

Abraham Collins, aged 30, of short stature, but well-formed and active; a hatter by trade; is married; has two healthy children, and affirms that he never had any thing like a venereal disease.

During the last three years, he has suffered from ulceration in the soft palate and posterior fauces. He was salivated about a year ago, with little or no benefit. Two years since, he lost the velum pendulum palati, which he states came away whilst he was under the operation of an emetic. His complaints have continued to grow worse, rather than better; and have been attended, also, with occasional deafness.

At present (1st of November, 1833), there is soreness, and some enlargement at the angles of the jaw, and under the ear; deafness; and difficulty of articulation. The whole of the posterior fauces, and the back part of the roof of the mouth, are intersected with irregular patches of ulceration—some covered with a rusty, yellowish crust, the intervals red and inflamed—the teeth crusted with black sordes; the gums soft, enlarged, and spongy. He,

nevertheless, makes no complaint of his general health.

He was ordered a strong alum gargle ; a blister to the back of the neck ; Sulphate of Quinia internally.

Some improvement followed : the blister healed, but the throat appeared rather worse, and a fœtid smell and taste were complained of. He was now directed to use a gargle, with Solution of Chloride of Soda ; and to take Nitrous Acid, in sugar and water, daily.

No improvement : repeat the blister.

Slight amelioration : minute doses of Muriate of Mercury evidently rendered things worse. He was ordered Tincture of Iodine, twenty drops twice, and afterwards three times a day, without any good effect.

23rd of December. — In consequence of some very interesting observations made by Dr. A. T. Thomson, at the Harveian Society, on the effects of Ioduret of Iron, in a case of Strumous Cachexia, and another of Chlorosis, Collins was put upon the use of that medicine, in the dose of two grains dissolved in distilled water, twice, and afterwards thrice a day.

31st of December. — All the ulcers looked clean, healthy, and were apparently healing. Continue the medicine.

21st of January. — No ulcer can be detected, by myself nor any of the pupils present. The

posterior fauces constitute one uniform cavity, without inequality of any kind, either above or at the sides. The amygdalæ are gone, as is every vestige of the velum; the whole surface presenting a healthy red hue. The opening into the posterior nares is distinctly visible. The tongue is clean; the general health good. The only constitutional effect of the medicine noticed by the patient was costiveness. Discontinue the medicine.

On the 8th of February, 1834, Collins presented himself again, with a slight return of ulceration in the throat. He was again put upon the use of the Ioduret of Iron, and is now better.

D. BARRY.

*Middlesex Dispensary,
20th February, 1834.*

CASE XI.

John Williams, aged 32 years, has been in several Hospitals for the cure of Syphilis, which he contracted six years ago. He has been salivated three or four times, and has undergone alterative courses of Mercury, which, although they afforded some temporary benefit, yet have failed to cure the disease; and latterly the symptoms have been exasperated whenever

Mercury has been administered so as to display its influence upon the salivary glands. He has, also, taken large quantities of Sarsaparilla, Nitric Acid, and other remedies, without any permanent advantage. He says that he is not at all addicted to drinking; and even dislikes ardent spirits.

The symptoms that Williams at present labours under, are—emaciation; severe nocturnal pains, accompanied with fever; a pulse of 120; and profuse perspirations: there are copper-coloured eruptions on several parts of the skin, and two ragged, foul ulcers on the scalp, with evident caries of the bone beneath them. Around one of them, which is seated over the upper part of the frontal bone, the scalp is red, tumefied for a considerable extent, and the bone beneath it is extremely tender to the touch. The bone is partly denuded, and a probe passes readily into several cavities in it. The urine is scanty, high-coloured, and deposits a pink sediment. The poor fellow is greatly depressed in spirits, from an idea that he shall not recover, and must fall a victim to this loathesome disease. He dreads the employment of more Mercury, although he expressed his willingness to do any thing which I may order. The following medicines were prescribed, and he was directed to live solely on a milk and vegetable diet.

R Hydrargyri Biniodureti, gr. ii.

Conii Extracti, gr. xii. Simul contundantur
et dividitur moles in pilulas quatuor æquales.

Sumatur una Sva quâque hōrâ.

R Ferri Iodureti,

Potassæ Hydriodatis, āā ʒss.

Aquæ Distillatæ, f ʒxii.—M. ut
fiat Mistura, cujus cochlearia ii majora inter
singulas pilularum doses sumenda.

The ulcers on the head were directed to be dressed with mild mercurial ointment.

May 2nd.—He says that he feels better than he has done for some months past: the fever, headache, and perspirations in particular, have abated; and his spirits are greatly improved—an effect, however, that may arise, in a great degree, from the confidence which he reposes in the present plan of treatment. His bowels are confined. The sores look more healthy.

Pergat in usu pilularum et Misturæ.

R Potassæ Tartratis ʒii.

Sennæ foliorum Infusi, f ʒxv.

Jalapæ Tincturæ, f ʒi.—M.

Haustus quamprimum sumendus.

He continued this plan of treatment, with little variation, until the 28th, when the ulcers of the head were completely cicatrized; and, although the surface remained very irregular,

yet, there was not the least tenderness, even when percussion was employed upon and round the parts. The ulcers of the throat have healed; and every vestige of eruption has disappeared: indeed, he affirms that he is well and strong.

Let him discontinue the use of the pills and the application of the ointment; but continue the mixture, in which the quantity of the Ioduret of Iron may be increased five grains.

He was strictly enjoined to continue the milk and vegetable diet.

June 13th.—He continued to improve in health and strength until yesterday, when, having been drenched in a shower of rain, and not having changed his wet clothes, he became feverish; and, to-day, complains of an acute pain in the left-side of the thorax, which is much augmented on taking a deep inspiration, or in coughing. His pulse is hard, and 96; his tongue is furred; and his bowels are confined. Let him discontinue his tonic medicine, and be bled to the extent of twelve ounces; give him a brisk purgative, and the simple solution of Tartar emetic, containing two grains in each dose, every fourth hour.

19th.—He lost his pain on the day he was bled, and says that he is now perfectly well.

He was directed to leave off his medicines: to continue to live temperately, and to regulate his bowels: and he was discharged, as cured, with a request to return to the Dispensary, if

any symptoms of the Syphilitic affection should reappear.

July 16th.—He has not returned; consequently, it may be concluded that he continues well.

CASE XII.

Mary Fisher, aged 33 years, with fair hair, and a brisk, active disposition. She says that, in February last, her husband, who is a carpenter, having been absent from home on a job, on his return, infected her with the venereal disease. From her account, she appears to have had a chancre, and a bubo, which broke: she says her throat was ulcerated, and there was a hole in the tongue. She applied for advice to a surgeon, who gave her pills, a lotion, and a black wash, from the use of which she derived much benefit, and considered that she was cured. On the 30th of March, however, the sore throat returned; and she was induced to apply to the same gentleman for advice. She took salts and pills, and used a gargle: the throat got better, but an eruption appeared on the skin, which has not been benefited by the treatment she has pursued, and, consequently, she was recommended to come to the Dispensary.

May 20th.—The symptoms under which she now laboured were ulceration of the throat, much irritative fever, and a copper-coloured

scaly eruption (Syphilitic psoriasis) covered in patches the greater part of the body, especially around the eyes; the conjunctiva had also a dull inflammatory look; the pulse was hard; and she complained of restless, sleepless nights. She was placed under the care of one of the senior pupils, who put her upon an alterative course of blue pill and Sarsaparilla; and ordered her to use a gargle of a solution of Nitrate of Silver, acidulated with Nitric Acid. As no beneficial result followed this plan of treatment, on the 16th of June she became my patient. She was ordered the following medicines; with directions to live entirely on a milk diet.

R Hydrargyri Biniodureti, gr. ii.

Conii Extracti, gr. xviii.—fiat

pilulæ sex æquales.

Sumatur una maneque nocte quotidie.

R Hydriodatis Potassa, ʒi.

Ferri Iodureti, gr. xii.

Aquæ Distillatæ, f ʒiii.—M.

Sumantur cochlearia iii majorater die.

July 14th.—She has pursued the above plan with great steadiness. Her throat is quite well, and the eruption, although not completely gone, yet, is so pale, as to be perceptible only when she is heated: in every other respect she is so much improved in health as to authorize the hope of a speedy and permanent cure.

CASE XIII.

S—— D——, a young gentleman, 19 years of age, has suffered, during several years, from a leprous affection, which has a very suspicious copper colour, and is attended with sore throat, and febrile symptoms. I have not been able to trace this eruption to any Syphilitic disease, although I strongly suspect that such has been its origin. It is always most severe in summer; abating considerably in violence during winter. The skin in many places is scarred with the cicatrices of sores; but I can get no satisfactory information respecting them.

This gentleman was recommended to try an alterative course of Plummer's pill and Sarsaparilla, which he continued for three months without any decided benefit being obtained; he was, therefore, put upon a course of the Ioduret of Iron, which he took in doses of four grains, three times a day; and employed a moderately stimulating gargle. He improved rapidly, and in four weeks was perfectly well.

In conclusion, I have witnessed the beneficial effects of the Hydriodate of Iron in many cases of atonic Dyspepsia.

FINIS.

